

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017382 A3

(51) International Patent Classification⁷: **F16D 27/08,**
47/00

(21) International Application Number:
PCT/US2004/024839

(22) International Filing Date: 3 August 2004 (03.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/493,594 8 August 2003 (08.08.2003) US

(71) Applicant (for all designated States except US): **AUTO-
MOTIVE POWER SYSTEMS, LLC** [US/US]; 3199
Lapeer Road, Auburn Hills, MI 48326 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **MOSER, George**
[US/US]; 1450 Stillman Road, Mason, Michigan 48854

(US). **SOMMER, Gordon** [US/US]; 831 Deer Court,
Plymouth, Michigan 48170 (US). **OSTAPOWICZ, Adam**
[US/US]; 33229 Barrington, Westland, Michigan 48186
(US).

(74) Agent: **OLSON, Stephen**; Harness, Dickey & Pierce,
P.L.C., P.O. Box 828, Bloomfield Hills, MI 48303 (US).

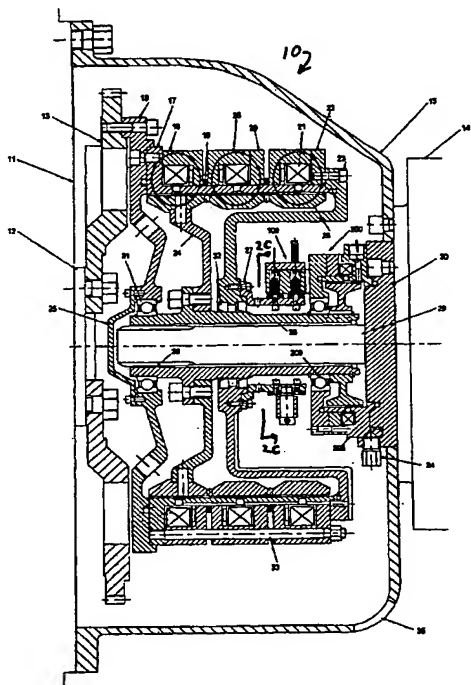
(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: **POWERTRAIN CLUTCH**

(57) Abstract: A powertrain clutch for transferring power from an
output shaft of an engine to an input shaft of a manual transmission
includes a housing and an electrically controlled clutch between the
input shaft and the output shaft for selectively coupling and uncou-
pling the output shaft and the input shaft. The clutching arrangement
further includes a clutch disposed between the input shaft and the
output shaft for synchronizing a speed of the input shaft with a speed
of the output shaft.



WO 2005/017382 A3



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
15 December 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— with international search report